

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patentee : Keiji Kanota et al.

Application Serial No. :

Filed :

Application to
Reissue Patent No. : 5,991,500

Issued : November 23, 1999

Title : COPY CONTROL FOR A VIDEO SIGNAL WITH
COPYRIGHT SIGNALS SUPERIMPOSED AS
PREDETERMINED BITS IN THE VBID DATA OF
THE VIDEO SIGNAL

Examiner :

Art Unit :

745 Fifth Avenue
New York, NY 10151

DECLARATION OF INVENTORS

We, the below-named inventors, hereby declare that:

1. Our residences, post office addresses and citizenships are as stated below next to our names.
2. We verily believe ourselves to be the original, first and joint inventors of the invention described and claimed in U.S. Patent No. 5,991,500 for which a reissue patent is sought on the invention and in the specification filed herewith. Also, by being the named inventors on the reissue application and the original application, and by our education, training and experience, we are qualified to render opinions concerning the subject matter of the reissue application.

3. We hereby state that we have reviewed and understand the contents of the aforementioned specification, including the claims.

4. We acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to us to be material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

5. We hereby claim foreign priority benefits under Title 35, United States Code § 119 from Japanese applications numbers 05-077044, filed April 2, 1993 and 05-213206, filed August 27, 1993, and state that no other application for patent or inventor's certificate or any PCT international application was filed by us on the same subject matter prior to April 2, 1993. Certified copies of these priority applications were filed in U.S. Patent No. 5,991,500. We also claim priority benefits under Title 35, United States Code Sec. 120 from United States Application Serial No. 08/220,049, of which U.S. Patent No. 5,991,500 is a divisional.

6. We do not know and do not believe that the invention was ever known or used in the United States of America before our invention thereof.

7. We verily believe the original Letters Patent to be wholly or partly inoperative or invalid by reason of our claiming more or less than we had the right to claim in the patent by at least failing to claim the subject matter including:

a. A method of processing a video signal to selectively permit copying thereof, said video signal having an effective picture portion containing useful picture information from which a viewable picture is displayed and a non-picture portion in which is disposed vertical blanking interval (VBID) data comprised of a plural-bit mode number and associated plural-bit data or data flags wherein said plural-bit mode number selectively classifies said associated plural-bit data or data flags as data or flags such that predetermined bits of said associated plural-

bit data or data flags represent different information as a function of the classification by said plural-bit mode number, said method comprising the steps of generating copyright information data indicative of whether the viewable picture is subject to copyright; generating copy generation data indicative of whether or not at least one successive generation of copies can be made from the processed video signal when the copyright information data indicates the viewable picture is subject to copyright; and setting said predetermined bits as the copyright information data and the copy generation data when said plural-bit mode number classifies said associated plural-bit data or data flags as flags, thereby to produce said processed video signal.

b. A method of selectively recording a video signal having an effective picture portion containing useful picture information from which a viewable picture is displayed and a non-picture portion in which is disposed vertical blanking interval (VBID) data comprised of a plural-bit mode number and associated plural-bit data or data flags, wherein said plural-bit mode number selectively classifies said associated plural-bit data or data flags as data or flags such that when said plural-bit mode number classifies said associated plural-bit data or data flags as flags, predetermined bits of the associated plural-bit data flags represent copyright information indicative of whether the viewable picture is subject to copyright and copy generation information indicative of whether or not at least one successive generation of copies can be made from the video signal when the copyright information data indicates the viewable picture is subject to copyright, and when said plural-bit mode number classifies said associated plural-bit data or data flags as data, said predetermined bits represent other information, said method comprising the steps of detecting said copyright information and said copy generation information; modifying the predetermined bits to indicate a decremented number of successive generations of copies that can be made from the video signal if said copyright information

indicates that the viewable picture is subject to copyright; recording the video signal having said copyright information and said modified copy generation information in said VBID data; and selectively inhibiting the recording of the video signal when said copyright information indicates that said viewable picture is subject to copyright and the detected copy generation information indicates that no successive generations of copies may be made from the video signal.

c. A method of reproducing a video signal having an effective picture portion and a non-picture portion and containing copy protection information representing whether a video picture derived from said video signal is subject to copyright and whether at least one successive generation of copies can be made from said video signal when the copy protection information indicates the viewable picture is subject to copyright, said method comprising the steps of playing back said video signal from a record medium; detecting said copy protection information in the played back video signal; generating copyright information data indicative of whether said video picture is subject to copyright; generating copy generation data indicative of whether or not least one successive generation of copies can be made from said played back video signal when the copyright information data indicates the viewable picture is subject to copyright; setting both said copyright information data and said copy generation data as predetermined bits of plural-bit data flags which are associated with and classified by a plural-bit mode number, said plural-bit data flags and plural-bit mode number being included in vertical blanking interval (VBID) data, and said predetermined bits being used to represent other information as a function of the classification of said plural-bit data flags by said plural-bit mode number; and disposing said VBID data in the non-picture portion of said played back video signal.

d. Apparatus for processing a video signal to selectively permit copying thereof, said video signal having an effective picture portion containing useful picture information from

which a viewable picture is displayed and a non-picture portion in which is disposed vertical blanking interval (VBID) data comprised of a plural-bit mode number and associated plural-bit data or data flags wherein said plural-bit mode number selectively classifies said associated plural-bit data or data flags as data or flags such that predetermined bits of said associated plural-bit data or data flags represent different information as a function of the classification by said plural-bit mode number, said apparatus comprising means for generating copyright information data indicative of whether the viewable picture is subject to copyright; means for generating copy generation data indicative of whether or not at least one successive generation of copies can be made from the processed video signal when the copyright information data indicates the viewable picture is subject to copyright; and means for setting said predetermined bits as the copyright information data and the copy generation data when said plural-bit mode number classifies said associated plural-bit data or data flags as flags, thereby to produce said processed video signal.

e. Apparatus for selectively recording a video signal having an effective picture portion containing useful picture information from which a viewable picture is displayed and a non-picture portion in which is disposed vertical blanking interval (VBID) data comprised of a plural-bit mode number and associated plural-bit data or data flags wherein said plural-bit mode number selectively classifies said associated plural-bit data or data flags as data or flags such that when said plural-bit mode number classifies said associated plural-bit data or data flags as flags, predetermined bits of the associated plural-bit data flags represent copyright information indicative of whether the viewable picture is subject to copyright and copy generation information indicative of whether or not at least one successive generation of copies can be made from the video signal when the copyright information data indicates the viewable picture is

subject to copyright, and when said plural-bit mode number classifies said associated plural-bit data or data flags as data, said predetermined bits represent other information, said apparatus comprising means for detecting said copyright information and said copy generation information; means for modifying the predetermined bits to indicate a decremented number of successive generations of copies that can be made from the video signal if said copyright information indicates that the viewable picture is subject to copyright; means for recording the video signal having said copyright information and said modified copy generation information in said VBID data; and means for selectively inhibiting the recording of the video signal when said copyright information indicates that said viewable picture is subject to copyright and the detected copy generation information indicates that no successive generations of copies may be made from the video signal.

f. Apparatus for reproducing a video signal having an effective picture portion and a non-picture portion and containing copy protection information representing whether a video picture derived from said video signal is subject to copyright and whether at least one successive generation of copies can be made from said video signal, said apparatus comprising means for playing back said video signal from a record medium; means for detecting said copy protection information in the played back video signal; means for generating copyright information data indicative of whether said video picture is subject to copyright; means for generating copy generation data indicative of whether or not at least one successive generation of copies can be made from said played back video signal when the copyright information data indicates the viewable picture is subject to copyright; means for setting both said copyright information data and said copy generation data as predetermined bits of plural-bit data flags which are associated with and classified by a plural-bit mode number, said plural-bit data flags

and plural-bit mode number being included in vertical blanking interval (VBID) data, and said predetermined bits being used to represent other information as a function of the classification of said plural-bit data flags by said plural-bit mode number; and means for disposing said VBID data in the non-picture portion of said played back video signal.

g. A method of processing a video signal to selectively permit copying thereof, said video signal having vertical blanking interval data (VBID) disposed in a predetermined line in a non-effective picture portion that includes two bits to indicate whether the video signal permits copying or not, said method comprising the steps of

generating one of the two bits indicative of whether the viewable picture in an effective picture portion is subject to copyright, and

generating the other of the two bits indicative of whether or not at least one successive generation of copies can be made from the processed video signal when the one of the two bits indicates the viewable picture is subject to copyright.

8. We did not discover that the claims of the original patent claimed more or less than we had a right to claim until after the original patent was issued.

9. No claim was previously presented during prosecution of the above referenced patent that particularly claimed the method or apparatus described in paragraph 7 above.

10. The error noted above, as well as any other errors to be corrected herein arose without any deceptive intention on our part.

11. New claims 61-85 submitted with this application particularly point out the subject matter which we considered our invention and round out the scope of protection to

which we are entitled. By the omission of such claims the original patent claims less than we had a right to claim.

We hereby appoint William S. Frommer, Registration No. 25,506, of Frommer Lawrence & Haug LLP or his duly appointed associate, our attorney, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to file continuation and divisional applications thereof, to receive the Patent, and to transact all business in the Patent and Trademark Office and in the Courts in connection therewith, and specify that all communications about the application are to be directed to the following address:

William S. Frommer, Esq.
c/o Frommer Lawrence & Haug LLP
745 Fifth Avenue
New York, New York 10151

Direct all telephone calls to: (212) 588-0800 to the attention of William S. Frommer, Esq.

Facsimile: (212) 588-0500.

Wherefore we pray that we may be allowed to surrender the Letters Patent No. 5,991,500 granted November 23, 1999, whereof Sony Corporation, on whose behalf and with whose assent this application is made, is the sole owner, by Assignment, and that Letters Patent may be reissued to Sony Corporation for the same invention upon the attached specification.

We, the undersigned applicants, further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Keiji Kanota
Keiji Kanota

September 27, 2001
Date

Residence: Kanagawa, Japan

Citizenship: Japan

Tadashi Ezaki
Tadashi Ezaki

October 3, 2001
Date

Residence: Tokyo, Japan

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Teruhiko Kori
Teruhiko Kori

October 4, 2001
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ASSENT OF ASSIGNEE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The undersigned, authorized by the assignee, Sony Corporation, states that Sony Corporation, a corporation of Japan, is the assignee of the entire right, title and interest in the patent identified above by virtue of an assignment from the inventors of application Serial No. 08/220,049, the parent of divisional application serial no. 08/990,480 which issued as U.S. Patent 5,991,500 on November 23, 1999, the present application being a reissue thereof. The assignment was recorded on July 18, 1994 at Reel 7116, Frame 0145.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above.

Sony Corporation hereby assents to the filing of the above-identified application
to reissue U.S. Patent 5,991,500.

SONY CORPORATION

By Keisuke Tanaka

Keisuke Tanaka

Manager

Intellectual Property Division

Date: September 25, 2001

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